

# Signal lamps with integrated LED - 5 mm

### **Technical Data**

**General information** Form of lens Colour of lens Diameter of collar

**Dimensions** Length of collar Overall height Mounting depth Mounting hole

# Mechanical design

Mounting Terminals Lamp socket Lamp

integr.

LED

see order block see order block see order block

see order block see order block see order block 5 mm

pressing into hole solder terminals no see order block

# $\begin{array}{l} \textbf{Electrical characteristics}\\ Operating voltage U_B\\ Integrated currency resistor\\ Forward voltage U_F at 25 \ ^{\circ}C \end{array}$

Reverse voltage  $U_R$  at 25 °C Forward current,  $I_F$  at 25 °C Reverse current  $I_R$  at 25 °C Power dissipation  $P_{tot}$  at 25 °C

#### Other specifications

Degree of protection from front side Weight see order block see order block at 10 mA forward current 2.2 V 3 Vsee order block 100  $\mu$ A max. 120 mW

0.35 g

Operating voltage  $U_B$ : DC voltage from 5 to 28 V

A suitable series resistor is installed in the unit; versions without series resistor must be fitted with an external one.

External resistor: Rv= (UB - UF):IF

Recommended ratings of external resistors: - for 5 - 7 V =  $330 \Omega 0.25 W$ - for 12 - 16 V =  $1.1 k\Omega 0.25 W$ - for 24 - 28 V =  $2.4 k\Omega 0.5 W$ 



# Signal lamps with integrated LED - 5 mm, protruding LED

Pict.: red				S-az	
Integrated currency resistor	Operating voltage $U_B$	Forward current, I⊧ at 25 °C	Lamp	Colour of lens	Order no.
yes	24 - 28 V	8 - 12 mA	LED red	transparent red	1.69.508.804/0000
yes	24 - 28 V	8 - 12 mA	LED green	transparent green	1.69.508.810/0000
yes	24 - 28 V	8 - 12 mA	LED yellow	transparent yellow	1.69.508.816/0000

Technical data see page 3 - 4

Long terminal is anode.

## Signal lamps with integrated LED - 5 mm, round protruding lens

Pict.: yellow		8,7 8,7 1.6×0.7 1.6×0.7 1.6×0.7 3.5		S-a2	
Integrated currency resistor	Operating voltage U <sub>B</sub>	Forward current, I⊧ at 25 °C	Lamp	Colour of lens	Order no.
no	according to series resistor 5 - 28 V	max. 20 mA	LED green	transparent green	1.69.508.837/1503
no	according to series resistor 5 - 28 V	max. 20 mA	LED yellow	transparent yellow	1.69.508.843/1402
yes	24 - 28 V	8 - 12 mA	LED red	transparent red	1.69.508.834/1301
yes	24 - 28 V	8 - 12 mA	LED green	transparent green	1.69.508.840/1503
yes	24 - 28 V	8 - 12 mA	LED yellow	transparent yellow	1.69.508.846/1402
yes	24 - 28 V	8 - 12 mA	LED super bright red	transparent red	1.69.508.835/1300
yes	24 - 28 V	8 - 12 mA	LED super bright yellow	transparent yellow	1.69.508.847/1400

Technical data see page 3 - 4

Long terminal is anode.

3

integr. LED



# Signal lamps with integrated LED - 5 mm, round flush lens

-				s <sub>-az</sub>	
Pict.: green Integrated currency resistor	Operating voltage U <sub>B</sub>	Forward current, I⊧ at 25 °C	Lamp	Mounting hole Colour of lens	Order no.
no	according to series resistor 5 - 28 V	max. 20 mA	LED red	transparent red	1.69.508.861/1301
no	according to series resistor 5 - 28 V	max. 20 mA	LED green	transparent green	1.69.508.867/1503
no	according to series resistor 5 - 28 V	max. 20 mA	LED yellow	transparent yellow	1.69.508.873/1402
yes	24 - 28 V	8 - 12 mA	LED red	transparent red	1.69.508.864/1301
yes	24 - 28 V	8 - 12 mA	LED green	transparent green	1.69.508.870/1503
yes	24 - 28 V	8 - 12 mA	LED yellow	transparent yellow	1.69.508.876/1402
yes	24 - 28 V	8 - 12 mA	LED super bright red	transparent red	1.69.508.865/1300
yes	24 - 28 V	8 - 12 mA	LED super bright yellow	transparent yellow	1.69.508.877/1400

Technical data see page 3 - 4

3 - 6

Long terminal is anode. \* Without series resistor, mounting depth = 18 mm

3

integr. LED